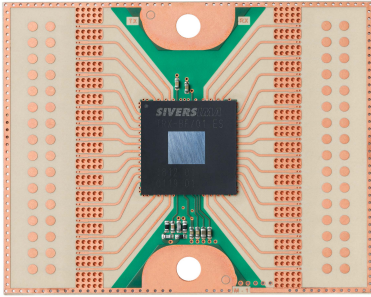


High performance millimetre wave RF module



The Sivers IMA 16+16 IEEE802.11ad Beamforming RF Module is optimized for high performance WiGig applications. It is compliant with the IEEE 802.11ad standard and is designed to interface with market leading baseband modems. The RF Module is targeting data and telecommunication infrastructure solutions such as Fixed Wireless Access, Residential broadband access, Fronthaul, Small cell backhaul, Macro cell backhaul, Wireless high-speed point to multipoint networks, Meshed networks, Wireless access points and more.

The RF Module architecture is using direct conversion in both transmit and receive mode, with a signal path optimized for the on-board 60 GHz patch antenna and seamless IQ connection with the baseband modem. It includes analog channel filtering for suppression out of band interferers, making the RF Module robust in a noisy radio environment. It includes a fully autonomous AGC, optimizing the receive gain based on both wanted as well as out of band signal levels. The module integrates SiversIMA high performance TRX BF/01 mm-wave beamforming Transceiver IC, antenna arrays, loop filter, LDO and base band functionality, using a high speed Samtec 100-pin as board to board connector interface.

Benefits

- 60 GHz Module Set has all the heavy lifting done for you
- A solution for quick validation, proof of concept and used as an referens design
- The antenna array and all the beamforming magic are already built into the module
- Well defined interface to the modem
- Few external components

Features

- Wide-band receive and transmit antenna array optimized for operation in the band: 57-66 GHz
- 16 Receive and 16 Transmit Beamforming channels
- Compliant with the IEEE 802.11ad standard, MCS0-12 modulation
- Support for 2GHz channels
- Support for beamforming and steering +/- 45degrees
- Support for 128QAM modulation full channel
- Support for 256QAM modulation half channel
- Support for half and quarter band channels
- Excellent RF performance providing best in class EVM performance
- Providing a combined output power of +40dBm (EIRP)
- Fixed cut-off analog Receive/Transmit IQ baseband filters
- DC connection to the baseband modem
- Easy to use with autonomous calibration routines and seamless baseband interface
- Auxiliary ADC for temperature measurements
- Small highly integrated form factor

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